

2022 – Final Awards – ND State Science & Engineering Fair

Senior Division Sweepstakes Winners

The first place (Marcus J. Friskop Sweepstakes) winner received a gold state plaque, a jacket, a \$400 cash award from the Marcus J. Friskop Family, a \$500 cash award from the University of North Dakota College of Arts & Sciences, and a 1 Year \$2500 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

The second place (sweepstakes runner-up) winner received a gold state plaque, a jacket, a \$250 cash award from the University of North Division School of Medicine & Health Sciences, and a 1 Year \$2000 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

The third place (sweepstakes 2nd runner-up) winner received a state plaque, a hooded sweatshirt, a \$200 cash award from the University of North Dakota College of Engineering & Mines, and a 1 Year \$1000 Scholarship to the University of North Dakota and will advance to the ISEF in Atlanta Georgia and will exhibit his/her project.

Senior Division – 1st Place – Sweepstakes Winner

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

Senior Division – 2nd Place – Sweepstakes Runner-Up

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Senior Division – 3rd Place – Sweepstakes Second Runner-Up

Benjamin Ellingson, Maddock School District, "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

Senior Division Place Winners

Projects that are selected as finalists received a gold plaque and a jacket and will advance to the ISEF in Atlanta Georgia in May and will exhibit their project.

Projects selected as alternates received a silver plaque and are alternates to the ISEF in Atlanta Georgia in May but will not exhibit their project unless a finalist from that region cannot attend.

Northwest Region

1st Finalist: Lindsey Vachal, Tioga School District , "Effectiveness of Cattle Dewormers"

2nd Finalist: Gracie Nutt, Tioga School District , "A.I. T.A."

3rd Finalist: Abrianna Volz, Tioga School District , "Animals vs. Human Bacteria"

1st Alternate: Anthony Cardona, Tioga School District , "Between Boys and Girls, who has a better reaction time with virtual reality games"

2nd Alternate: Hunter Davis, Tioga School District , "Throwing Touchdowns and Kicking Field Goals with Ease"

3rd Alternate: Emma Berg, Tioga School District , "Colorful Learning"

Northeast Region

1st Finalist: Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

1st Alternate: Rebecca Sather, Olivia Whitney, Red River High School District , "D.B.D. 101 (Dead Body Decomposition)"

Southwest Central Region

1st Finalist: Alivia Geffre, Flasher School District , "Antibiotics vs Oils"

2nd Finalist: Jada Bonogofsky, Flasher School District , "Antibiotic Resistance"

1st Alternate: Summer Fleck, Flasher School District , "Conception Rates in Cattle As Affected By Mineral Consumption"

2nd Alternate: Sophia Jochim, Flasher School District , "What's Their Emergency?"

3rd Alternate: Grant Hauge, Flasher School District , "How Much Is Too Much"

Southeast Region

1st Finalist: Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

2nd Finalist: Brayden Sutherland, Lisbon School District , "Social Confidence"

3rd Finalist: Elizabeth Sherbrooke, Hankinson School District , "Analysis of Smiling Back "

4th Finalist: Elise Elliot, Hankinson School District , "Antibacterial Effectiveness of Hand Soaps"

1st Alternate: Cale Benson, Hankinson School District , "Significant Sunscreen"

2nd Alternate: Kardelen Hanson , Hankinson School District , "The Psychology and Demographics of Panic Buying"

3rd Alternate: Sofia Hanson, Hankinson School District , "Music In Different Cultures"

Junior Division Sweepstakes Winners

The first place (Sweepstakes) winner received a gold state plaque, a \$150 cash award from the ND IDeA Network of Biomedical Research Excellence and a \$250 cash award in honorarium of Marcus J. Friskop from the Maddock High School Science Fair Alumni Students.

The second place (Sweepstakes Runner-Up) winner received a silver plaque and a \$100 cash award from the ND IDeA Network of Biomedical Research Excellence.

Junior Division 1st Place – Sweepstakes Winner

Madelynn Greco, ASB School District , "Electrolysis"

Junior Division 2nd Place – Sweepstakes Runner-Up

Landon Gaudreau, ASB School District , "Can an engine run on gasoline vapors?"

Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

Junior Division Place Winners

All first and second place winners received a gold plaque. All third, fourth, and fifth place winners received a silver plaque.

Northwest Region

1st Place: Abigail Ferguson, Tioga School District , "Bubbling Water Tanks"

2nd Place: Zoey Conyers, East Fairview School District , "Think Beyond the Herb"

3rd Place: Anthony Kram, Williston School District , "The Mpemba Effect"

4th Place: Emma McCoy, ASB School District , "Salty Solution: The effect of salts on the boiling point of water"

5th Place: Jacob Grunenwald, Williston School District , "Rubberband Paddle Boat"

Northeast Region

1st Place: Sonakshi Singhal, South Middle School , "Variation in snow due to air pollution and presence of impurities"

2nd Place: Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

3rd Place: Ella Lizakowski, Schroeder Middle School , "Acid Fever"

4th Place: Layton Pribula, Schroeder Middle School , "Hearing the Rainbow"

5th Place: Kenai Auch, Schroeder Middle School , "Buzz Words"

Southwest Central Region

1st Place: Jacob Ohlhauser, Linton School District , "Got Bacteria?"

2nd Place: Aidyn Fisher, Scranton School District , "Under Pressure"

3rd Place: Brenna Eckroth, Flasher School District , "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

4th Place: Kinley Stadheim, Scranton School District , "The Uterine Swim Team"

5th Place: Taelyn Boldt, Flasher School District , "There Goes The Fabric"

Southeast Region

1st Place: Quincy Welder, Kidder County School District , "Bank It or Clank It"

2nd Place: Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

3rd Place: Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

4th Place: Cora Oster, Lisbon School District , "Water - What's In It?"

5th Place: Ava Frolek , Lidgerwood School District , "Hatching Brine Shrimp "

Agriculture/Soil Science

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

1 Winner: Senior Division: Monetary Award of \$150 And a Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

1 Winner: Junior Division: Monetary Award of \$150 And a Certificate

Sonakshi Singhal, South Middle School , "Variation in snow due to air pollution and presence of impurities"

North Dakota Soil Conservation District/Auxiliary

Project Related to Soil Conservation

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Caden Holte, Tioga School District , "Do bigger seeds grow bigger plants?"

Farmers Union Insurance - North Dakota

Project Related to Agriculture

2 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Farmers Union Insurance - North Dakota

Project Related to Agriculture

2 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Kinley Stadheim, Scranton School District , "The Uterine Swim Team"

Elizabeth Fedje, Brooke Gullickson, Jacey Nelson, Valley- Edinburg Middle School District , "A Race to Light"

North Dakota Farm Bureau

Project Related to Agriculture

2 Winners: Senior Division: Monetary Award of \$25 And A Certificate

Summer Fleck, Flasher School District , "Conception Rates in Cattle As Affected By Mineral Consumption"

Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

North Dakota Farm Bureau

Project Related to Agriculture

2 Winners: Junior Division: Monetary Award of \$25 And A Certificate

Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

Zoey Conyers, East Fairview School District , "Think Beyond the Herb"

Chemistry/Biochemistry

Department of Chemistry

Project in Chemistry

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Brenna Eckroth, Flasher School District , "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

Department of Chemistry

Project in Chemistry

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

American Chemical Society-Red River Valley Section

Project in Field of Chemistry

1 Winner: Junior Division: A \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, And a Certificate

Landon Gaudreau, ASB School District , "Can an engine run on gasoline vapors?"

American Chemical Society-Red River Valley Section

Project in Field of Chemistry

1 Winner: Senior Division: A \$100 Barnes and Noble Gift Card, A Periodic Table Scroll Pen, And a Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

NDSSEF Association

Project in Biochemistry

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Phillip Schuetzle, Linton School District , "Just Swish It"

NDSSEF Association

Project in Biochemistry

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Rebecca Sather, Olivia Whitney, Red River High School District , "D.B.D. 101 (Dead Body Decomposition)"

Earth/Atmospheric Sciences

Department of Atmospheric Sciences

Project in Atmospheric Sciences

1 Winner: Junior or Senior Division: Monetary Award of \$100 And a Certificate

Landon Gaudreau, ASB School District , "Can an engine run on gasoline vapors?"

Department of Geography

Project in Geography

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

Department of Geography

Project in Geography

1 Winner: Senior Division: Monetary Award of \$75 And a Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Harold Hamm School of Geology & Geological Engineering

Project in Geology/ Geological Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate

Malory Kemp, Cavalier School District , "Defeating the Drought through Soil Management Practices"

Harold Hamm School of Geology & Geological Engineering

Project in Geology/ Geological Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

North Dakota Geological Society

Project in Field of Geology or Earth Science

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

McKayla Sagini, Schroeder Middle School , "Desalination: Light Bulb VS Plastic Wrap"

North Dakota Geological Society

Project in Field of Geology or Earth Science

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

American Meteorological Society

Project Related to Meteorology

1 Winner: Junior or Senior Division: A Certificate

Malory Kemp, Cavalier School District , "Defeating the Drought through Soil Management Practices"

Association For Women Geoscientists

Project Related to Geosciences

1 Winner (Must Be A Female Exhibitor): Junior or Senior Division: A Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

National Oceanic & Atmospheric Administration

Project Related to Improved Understanding of the Earth's Processes

1 Winner: Junior Division: A Certificate

McKayla Sagini, Schroeder Middle School , "Desalination: Light Bulb VS Plastic Wrap"

NASA Earth System Science Award

Project Related to Earth's Interconnected Systems

1 Winner: Junior or Senior Division: A Certificate

Sonakshi Singhal, South Middle School , "Variation in snow due to air pollution and presence of impurities"

National Geographic Society

Project Related to Issues of Oceans, Lands, Wildlife, Human History & Cultures, and Human Ingenuity

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

Energy/Power/Electricity

Otter Tail Power Company

Project Related to Energy or Electricity

3 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Olivia Frolek , Lidgerwood School District , "Gel Electrophoresis"

Cale Benson, Hankinson School District , "Significant Sunscreen"

Mandy Oster, Tioga School District , "Wind Power vs. Solar Power"

Otter Tail Power Company

Project Related to Energy or Electricity

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Layton Pribula, Schroeder Middle School , "Hearing the Rainbow"

Abigail Ferguson, Tioga School District , "Bubbling Water Tanks"

Xcel Energy

Project Related to Energy or Electricity

3 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Layton Pribula, Schroeder Middle School , "Hearing the Rainbow"

Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

Landon Gaudreau, ASB School District , "Can an engine run on gasoline vapors?"

Xcel Energy

Project Related to Energy or Electricity

3 Winners: Senior Division: Monetary Award of \$25 And a Certificate

Olivia Frolek , Lidgerwood School District , "Gel Electrophoresis"

Cale Benson, Hankinson School District , "Significant Sunscreen"

Mandy Oster, Tioga School District , "Wind Power vs. Solar Power"

Engineering

Department of Petroleum Engineering

Project in Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate
Olivia Frolek , Lidgerwood School District , "Gel Electrophoresis"

College of Engineering and Mines

Project in Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate
Aidyn Fisher, Scranton School District , "Under Pressure"

College of Engineering and Mines

Project in Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate
Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life:
Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage
Techniques"

College of Engineering and Mines

Project in Engineering (Female Winner)

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Engineering Scholarship And a
Certificate
Daci Wells, Flasher School District , "3 Way Bend Test Comparison"

Society of Automotive Engineers

Project in Mobility Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate
Madelynn Greco, ASB School District , "Electrolysis"

Society of Automotive Engineers

Project in Mobility Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate
Gracie Nutt, Tioga School District , "A.I. T.A."

ASM Materials Education Foundation

Project in Materials Engineering

1 Winner: Junior or Senior Division: A Ribbon And a Certificate
Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

NPS Metals a Division of Owen Industries

Project Related to Manufacturing

1 Winner: Junior Division: Monetary Award of \$200 And a Certificate
Aidyn Fisher, Scranton School District , "Under Pressure"

NPS Metals a Division of Owen Industries

Project Related to Manufacturing

1 Winner: Senior Division: Monetary Award of \$300 And a Certificate
Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

Engineering (Chemical)

Department of Chemical Engineering

Project in Chemical Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate
McKayla Sagini, Schroeder Middle School , "Desalination: Light Bulb VS Plastic Wrap"

Department of Chemical Engineering

Project in Chemical Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate
Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life:
Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage
Techniques"

Engineering (Civil)

Department of Civil Engineering

Project in Civil Engineering

1 Winner: Junior Division: Monetary Award of \$25 And a Certificate
Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

Department of Civil Engineering

Project in Civil Engineering

1 Winner: Senior Division: Monetary Award of \$25 And a Certificate
Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life:
Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage
Techniques"

Engineering (Electrical)

Dr. Richard Schultz Award - Department of Electrical Engineering

Project in Electrical Engineering

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate
Madelynn Greco, ASB School District , "Electrolysis"

Dr. Richard Schultz Award - Department of Electrical Engineering

Project in Electrical Engineering

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate
Daci Wells, Flasher School District , "3 Way Bend Test Comparison"

Engineering (Mechanical)

Department of Mechanical Engineering

Project in Mechanical Engineering

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate
Abigail Ferguson, Tioga School District , "Bubbling Water Tanks"

Department of Mechanical Engineering

Project in Mechanical Engineering

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate
Gracie Nutt, Tioga School District , "A.I. T.A."

Environmental Sciences

College of Engineering and Mines

Project in Energy/Environmental Science

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate
Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life:
Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage
Techniques"

Ricoh Corporation

Project Related to Environmentally Friendly Businesses

1 Winner: Senior Division: A Certificate
Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for
Microbiological Supplementation"

NDSSEF Association

Project Related to Environmental Remediation

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Amaa Wijetunga, Grand Forks Public Library, "Filtering Water Through Denim Cloth Efficiency"

NDSSEF Association

Project Related to Environmental Remediation

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Human Nutrition/Food Science

Hot Cakes Café & Lodging

Project That Has Emphasis on Food Quality or Food Safety

1 Winner: Junior Division: Monetary Award of \$25, T-Shirt, And a Certificate

Brenna Eckroth, Flasher School District , "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

Hot Cakes Café & Lodging

Project That Has Emphasis on Food Quality or Food Safety

1 Winner: Senior Division: Monetary Award of \$25, T-Shirt, and a Certificate

Hailey Qual, Lisbon School District , "Testing Pasteurization Levels in Milk"

NDSSEF Association

Project Related to Human Nutrition or Food Science

2 Winners: Senior Division: Monetary Award of \$25 And a Certificate

Javin Friesz, Flasher School District , "Testing Water Quality"

Denver Nelson, Hankinson School District , "An Analysis of Various Drinking Water Sources"

NDSSEF Association

Project Related to Human Nutrition or Food Science

2 Winners: Junior Division: Monetary Award of \$25 And a Certificate

Blake Solberg, Schroeder Middle School , "Fast and the Fungus"

Carrie LaDuke, Flasher School District , "The Effect Of Egg Substitute On Muffin Quality"

ISEF Alumni

ISEF Alumni

Project as Determined by ISEF Judges

1 Winner: Junior or Senior Division: Monetary Award of \$200 And a Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

ISEF Alumni

Project as Determined by ISEF Judges

1 Winner: Junior or Senior Division: Monetary Award of \$100 And a Certificate

Madelynn Greco, ASB School District , "Electrolysis"

Life Sciences

Department of Biomedical Sciences

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Phillip Schuetzle, Linton School District , "Just Swish It"

Ava Frolek , Lidgerwood School District , "Hatching Brine Shrimp "

Department of Biomedical Sciences

Project in Area of Life Sciences (Molecular Biology Emphasis)

2 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

Elise Elliot, Hankinson School District , "Antibacterial Effectiveness of Hand Soaps"

Department of Biology

Project in Biology

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate

Malory Kemp, Cavalier School District , "Defeating the Drought through Soil Management Practices"

Department of Biology

Project in Biology

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Biology Scholarship and a Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

1 Winner: Senior Division: Monetary Award of \$300 And a Certificate

Summer Fleck, Flasher School District , "Conception Rates in Cattle As Affected By Mineral Consumption"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

1 Winner: Senior Division: Monetary Award of \$225 And a Certificate

Lindsey Vachal, Tioga School District , "Effectiveness of Cattle Dewormers"

North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Kinley Stadheim, Scranton School District , "The Uterine Swim Team"

Auxiliary to the North Dakota Veterinary Medical Association

Project Related to Veterinary Medicine

1 Winner: Junior Division: Monetary Award of \$50 And a Certificate

Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

Society for In Vitro Biology

Project in the Area of Tissue Culture

1 Winner: 11th Grader Division: A Certificate

Summer Fleck, Flasher School District , "Conception Rates in Cattle As Affected By Mineral Consumption"

NDSSEF Association

Project in Botany

1 Winner: Junior Division: Monetary Award of \$50 And A Certificate

Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

NDSSEF Association

Project in Botany

1 Winner: Senior Division: Monetary Award of \$50 And A Certificate

Grant Hauge, Flasher School District , "How Much Is Too Much"

Mathematics/Computer Science

Department of Mathematics

Project in Mathematics

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate
Quincy Welder, Kidder County School District , "Bank It or Clank It"

Department of Mathematics

Project in Mathematics

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Mathematics Scholarship and a Certificate

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

School of Electrical Engineering & Computer Science

Project in Computer Science

1 Winner: Junior Division: Monetary Award of \$100 and a Certificate
Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

School of Electrical Engineering & Computer Science

Project in Computer Science

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate
Reagan Chambers, Woodhaven Academy, "Monitoring Honeybee Hive Health With Computer Vision"

Mu Alpha Theta

Project Involving Modern Mathematics

1 Winner: Senior Division: A Certificate

Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

North Dakota Guaranty & Title Co.

Project Related to Computer Science (Emphasis in Artificial Intelligence)

1 Winner: Junior Division: Monetary Award of \$250 And a Certificate
Jakob Kehrwald, Schroeder Middle School , "Hand Eye Coor-drone-ation"

North Dakota Guaranty & Title Co.

Project Related to Computer Science (Emphasis in Artificial Intelligence)

1 Winner: Senior Division: Monetary Award of \$250 And a Certificate
Gracie Nutt, Tioga School District , "A.I. T.A."

Medicine/Health

ND IDeA Network of Biomedical Research Excellence

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$50 and a Certificate
Evelyn Chambers, Woodhaven Academy, "Clean Cage = Healthy Pet"

ND IDeA Network of Biomedical Research Excellence

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate
Lindsey Vachal, Tioga School District , "Effectiveness of Cattle Dewormers"

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$300 and a Certificate
Rebecca Sather, Olivia Whitney, Red River High School District , "D.B.D. 101 (Dead Body Decomposition)"

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$150 and a Certificate
Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

School of Medicine & Health Sciences

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$300 and a Certificate
Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

Department of Biomedical Sciences

Project in Pharmacology/Immunology

1 Winner: Junior Division: Monetary Award of \$100 and a Certificate
Mykenzie Winkler, Grant County School District , "Zap That Zit"

Department of Biomedical Sciences

Project in Pharmacology/Immunology

1 Winner: Senior Division: Monetary Award of \$100 and a Certificate
Jada Bonogofsky, Flasher School District , "Antibiotic Resistance"

North Dakota Dental Foundation

Project Related to Dentistry

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Brenna Eckroth, Flasher School District , "An Analysis Of Toothpaste Efficacy Using Various Potable Solutions"

Jenna Rode, Kidder County School District , "Rethink Your Drink"

North Dakota Dental Foundation

Project Related to Dentistry

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Elizabeth Sherbrooke, Hankinson School District , "Analysis of Smiling Back "

North Dakota Academy of Family Physicians

Project Related to Medicine

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate

Sophia Jochim, Flasher School District , "What's Their Emergency?"

American Society for Clinical Laboratory Science - North Dakota

Project Related to Laboratory Medicine

3 Winners: Senior Division: Monetary Award of \$50 And a Certificate

Elise Elliot, Hankinson School District , "Antibacterial Effectiveness of Hand Soaps"

Alivia Geffre, Flasher School District , "Antibiotics vs Oils"

Olivia Frolek , Lidgerwood School District , "Gel Electrophoresis"

American Society for Clinical Laboratory Science - North Dakota

Project Related to Laboratory Medicine

3 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Skye Weinberger, Flasher School District , "Efficacy of Hand Hygiene While Using Public Restrooms"

Cora Oster, Lisbon School District , "Water - What's In It?"

Rali Kautz, Kidder County School District , "Ewww, Gross! What is that?!"

North Dakota Pharmacists Association

Project in Field of Pharmacology

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate

Mykenzie Winkler, Grant County School District , "Zap That Zit"

North Dakota Pharmacists Association

Project in Field of Pharmacology

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Lindsey Vachal, Tioga School District , "Effectiveness of Cattle Dewormers"

Microbiology

Department of Biomedical Sciences

Project in Microbiology/Infectious Disease

2 Winners: Junior Division: Monetary Award of \$50 And a Certificate

Jacob Ohlhauser, Linton School District , "Got Bacteria?"

Blake Solberg, Schroeder Middle School , "Fast and the Fungus"

Department of Biomedical Sciences

Project in Microbiology/Infectious Disease

2 Winners: Senior Division: Monetary Award of \$100 And a Certificate

Elise Elliot, Hankinson School District , "Antibacterial Effectiveness of Hand Soaps"

Emma Kratcha, Hankinson School District , "Soil Farms II: Optimizing Cropland Soil Conditions for Microbiological Supplementation"

Department of Biomedical Sciences

Project in Medical or Health Sciences

1 Winner: Junior Division: Monetary Award of \$100 And a Certificate

Amla Prochnow, Hankinson School District , "The Hidden Antimicrobial Potential of Houseplants"

Department of Biomedical Sciences

Project in Medical or Health Sciences

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Jada Bonogofsky, Flasher School District , "Antibiotic Resistance"

Military/Navy

Navy

Project (All Categories Considered)

2 Winners: Senior Division: An Educational Recognition Award Valued at \$75, A Medallion, and a Certificate

Elise Elliot, Hankinson School District , "Antibacterial Effectiveness of Hand Soaps"

Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

Navy

Project (All Categories Considered)

2 Winners: Junior Division: A Medallion And a Certificate

Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

Chaskee Schmidt, Flasher School District , "Germ Busters"

Military/North Dakota Army National Guard

North Dakota Army National Guard

Project That Has Applications Useful to North Dakota Army National Guard

1 Winner: Junior Division: A Duffle Bag With Assortment of Items

Layton Pribula, Schroeder Middle School , "Hearing the Rainbow"

North Dakota Army National Guard

Project That Has Applications Useful to North Dakota Army National Guard

1 Winner - Runner Up: Junior Division: A Backpack With Assortment of Items

Cora Oster, Lisbon School District , "Water - What's In It?"

North Dakota Army National Guard

Project That Has Applications Useful to North Dakota Army National Guard

1 Winner: Senior Division: A Duffle Bag With Assortment of Items

Sophia Jochim, Flasher School District , "What's Their Emergency?"

North Dakota Army National Guard

Project That Has Applications Useful to North Dakota Army National Guard

1 Winner - Runner Up: Senior Division: A Backpack With Assortment of Items

Javin Friesz, Flasher School District , "Testing Water Quality"

Military/United States Air Force

Air Force

Project That Has Applications Useful to Air Force

4 Winners: Junior or Senior Division: An Over-the-Shoulder Sling Pack, Power Bank Charger, Dog Tag

USB Flash Drive, A Dual USB Car Charger, and a Certificate

Kiya Sparks, Tioga School District , "Did you or Didn't you?"

Jacob Ohlhauser, Linton School District , "Got Bacteria?"

Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

Brayden Sutherland, Lisbon School District , "Social Confidence"

Physics/Astronomy

Department of Physics & Astrophysics

Project in Physics & Astronomy

2 Winners: Junior Division: Monetary Award of \$100 And a Certificate

Layton Pribula, Schroeder Middle School , "Hearing the Rainbow"

Micah Levene, Strasburg School District , "Sound To Light"

Department of Physics & Astrophysics

Project in Physics & Astronomy

1 Winner: Senior Division: Monetary Award of \$100 and a \$500 Physics Scholarship and a Certificate

Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious

Impact of Sound Waves on Human Heart Rates"

United States Metric Association

Project Using Metric System for Measurements

5 Winners: Junior Division: A Certificate

Trevon Soiseth, Grenora School District , "The "Par"fect Temperature to Golf in"

Quincy Welder, Kidder County School District , "Bank It or Clank It"

Keegan Isakson, Kidder County School District , "Die-fi, What Kills Your Wi-fi?"

Henry VonBank, Hankinson School District , "It's a Bird, It's a Plane, It's a Man Yes, It's a Paper Plane"

Billee Sundhagen, Tioga School District , "Do the Different Wave Lengths of Light Affect Solar Energy"

Social/Behavioral Sciences

Department of Psychology

Project in Psychology or Behavioral Science

2 Winners: Junior Division: Monetary Award of \$100 And a Certificate

Kingdom Facade, ASB School District , "How does playing sports affect your brain "

Jake Schlothauer, East Fairview School District , "How Does Music Affect the Heart Rate"

Department of Psychology

Project in Psychology or Behavioral Science

2 winners: Senior Division: Monetary Award of \$100 And a Certificate

Baasch/Jordan Team, Lisbon School District , "The Stroop Effect"

Kardelen Hanson, Hankinson School District , "The Psychology and Demographics of Panic Buying"

Virginia George Inheritance Fund

Project in Social or Behavioral Science

1 Winner: Senior Division: Monetary Award of \$50 And a Certificate
Brayden Sutherland, Lisbon School District , "Social Confidence"

Virginia George Inheritance Fund

Project in Social or Behavioral Science

1 Winner: Junior Division: Monetary Award of \$25 And a Certificate
Kyan Stadheim, Scanton School District , "Match-Up"

American Psychological Association

Project Related to Psychology

1 Winner: Junior or Senior Division: A Certificate
Kaden Keller, Tioga School District , "Eyewitness Accuracy"

Sweepstakes

Yale Science And Engineering Association

Project in Areas of Computer Science

1 Winner (Must Be a 11th Grade Student): Senior Division: A Medallion And A Certificate
Sudiksha Singhal, Red River High School District , "The Physical Effects of Sound; the Unconscious Impact of Sound Waves on Human Heart Rates"

Regeneron Biomedical Science Award

Project Related to Biomedical Science and Research

1 Winner: Senior Division: Monetary Award of \$500 And a Certificate
Jada Bonogofsky, Flasher School District , "Antibiotic Resistance"

Water Quality

American Water Works Association

Project Related to Drinking Water Quality

1 Winner: Junior Division: Monetary Award of \$75 And a Certificate
Abigail Ferguson, Tioga School District , "Bubbling Water Tanks"

American Water Works Association

Project Related to Drinking Water Quality

1 Winner: Senior Division: Monetary Award of \$75 And a Certificate
Gavin Kratcha, Hankinson School District , "An Innovative Approach to Manage the Environmental Impact of Agricultural Drainage Water"

North Dakota Water Environment Association

Project Related to Water Quality

1 Winner: Senior Division: Monetary Award of \$75 And A Certificate

Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

North Dakota Water Environment Association

Project Related to Water Quality

1 Winner: Junior Division: Monetary Award of \$75 And A Certificate

McKayla Sagini, Schroeder Middle School , "Desalination: Light Bulb VS Plastic Wrap"

North Dakota Rural Water Systems Association

Project Related to Water Quality

1 Winner: Senior Division: Monetary Award of \$100 And a Certificate

Benjamin Ellingson, Maddock School District , "Brining Contaminated Soils Back to Life: Remediating Brine Contaminated and Alkaline Soils Using Phytoremediation and Engineered Drainage Techniques"

Water Environment Federation

Project Related to Water Quality or Water Conditions

1 Winner: Junior or Senior Division: A Certificate

Malory Kemp, Cavalier School District , "Defeating the Drought through Soil Management Practices"